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PATENT COOPERATION TREATY

PCT/FR2003/003288



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PA1652WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR2003/003288	International filing date (<i>day/month/year</i>) 04 novembre 2003 (04.11.2003)	Priority date (<i>day/month/year</i>) 08 novembre 2002 (08.11.2002)
International Patent Classification (IPC) or national classification and IPC B81C 1/00, B32B 31/00, B01L 3/00, B81B 1/00		
Applicant COMMISSARIAT A L'ENERGIE ATOMIQUE		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 25 mai 2004 (25.05.2004)	Date of completion of this report 15 April 2005 (15.04.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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I. Basis of the report

1. With regard to the elements of the international application:*

☒ the international application as originally filed

☒ the description:

pages 1-10, as originally filed

pages, filed with the demand

pages, filed with the letter of

☒ the claims:

pages, as originally filed

pages, as amended (together with any statement under Article 19

pages, filed with the demand

pages 1-15, filed with the letter of 03 July 2004 (03.07.2004)

☒ the drawings:

pages 1/4-4/4, as originally filed

pages, filed with the demand

pages, filed with the letter of

☐ the sequence listing part of the description:

pages, as originally filed

pages, filed with the demand

pages, filed with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

☐ the description, pages

☒ the claims, Nos. 16

☐ the drawings, sheets/fig

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-12	YES
	Claims	13-15	NO
Inventive step (IS)	Claims	1-12	YES
	Claims	13-15	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims	-	NO

2. Citations and explanations

1. Reference is made to the following document:

D1: H. DREUTH, C. HEIDEN: "A method for local application of thin organic adhesive films on micropatterned structures" MATERIALS SCIENCE AND ENGINEERING: C, vol. 5, no. 3-4, 1 February 1998 (1998-02-01), pages 227-231, XP002278129.

2. Document D1, which is considered to be the prior art closest to the subject matter of claim 1, describes (cf. figure 1; the references between parentheses apply to said document):

2.1 A method for producing a component, comprising a microstructured substrate ("substrate, microstructure") and a complementary element ("PET foil") mutually assembled using an assembly joint ("adhesive film"), which method comprises the production of said assembly joint by means of:

- a first step of depositing a thin film of polymer onto a transfer substrate ("adhesive film brought into contact"),

- a second step of contacting said microstructured substrate and said thin polymer film ("I. Substrates brought into contact", "II. Pressure applied"), and
- a third step of removing said transfer substrate ("III. Substrates separated") in such a way that the assembly joint is formed by the areas of said thin polymer film that were in contact with said microstructured substrate during the second step, which method is characterised in that the chemical affinity between said microstructured substrate and said thin polymer film is greater than that between said transfer substrate and said thin polymer film (see the paragraph entitled "3. Results", the PTFE substrate is selected because of its low surface energy, which enables said polymer film to be transferred more completely ("adhesive layer could be transferred to the microstructures more completely"))).

It follows that the subject matter of claim 1 differs from this known method in that:

- the transfer substrate is flexible and is removed by pulling one end thereof.

2.2 The subject matter of claim 1 is, therefore, novel (PCT Article 33(2)).

2.3 The problems that the present invention is intended to solve can therefore be considered to be those of facilitating more intimate contact between the adhesive thin film and the microstructured substrate and enhancing the reliability of thin-film tearing.

- 2.4 The solution to this problem, as proposed in claim 1 of the present application, is considered to involve an inventive step (PCT Article 33(3)), for the following reasons:

Document D1 discusses problems of contact and tearing (cf. paragraph entitled "3. Results"). However, none of the documents cited in the international search report suggests a flexible transfer substrate.

- 2.5 Claims 2-12 are dependent on claim 1 and, as such, therefore also fulfil the PCT requirements of novelty and inventive step.

3. The present application does not fulfil the requirements set forth in PCT Article 33(1) because the subject matter of claim 13 does not comply with the requirement of novelty defined in PCT Article 33(2).

Document D1 describes (cf. figure 1, V; the references between parentheses apply to said document):

a component produced using the method as per claim 1 and characterised in that the complementary element is a cover (cf. also the PCT International Search and Preliminary Examination Guidelines, A5.26).

- 3.1 Dependent claims 14 and 15 do not contain any features which, in combination with the features of any one of the claims to which they refer, might

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define subject matter that fulfils the PCT requirement of inventive step, for the following reasons:

The thin film disclosed in document D1 is adhesive. As a result, it would appear to be obvious for a person skilled in the art to make use of this feature by adhering various items onto the microstructured substrate.